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EXAMINER	
KIM, TAE K	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/520,498	AHN ET AL.	
	Examiner	Art Unit	
	Tae K. Kim	2109	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *06 January 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-21* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-21* is/are rejected.

7)☒ Claim(s) *2* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *06 January 2005* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☒ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *01/06/2005; 11/14/2005*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

This is in response to the application filed on January 6, 2005 where Claims 1 – 21, of which Claims 1, 5, 16, 17, and 19 are in independent form, are presented for examination.

Priority

Acknowledgment is made of applicant's claim for foreign priority based on an application filed in Republic of Korea on July 10, 2002. It is noted, however, that applicant has not filed a certified copy of the Korean application (10-2002-0040039) as required by 35 U.S.C. 119(b).

Specification

The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use.

Arrangement of the Specification

As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

(a) TITLE OF THE INVENTION.
(b) CROSS-REFERENCE TO RELATED APPLICATIONS.
(c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT.
(d) THE NAMES OF THE PARTIES TO A JOINT RESEARCH AGREEMENT.
(e) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC.
(f) BACKGROUND OF THE INVENTION.
    (1) Field of the Invention.
    (2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.
(g) BRIEF SUMMARY OF THE INVENTION.
(h) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).
(i) DETAILED DESCRIPTION OF THE INVENTION.

(j) CLAIM OR CLAIMS (commencing on a separate sheet).
(k) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).
(l) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A "Sequence Listing" is required on paper if the application discloses a nucleotide or amino acid sequence as defined in 37 CFR 1.821(a) and if the required "Sequence Listing" is not submitted as an electronic document on compact disc).

35 U.S.C. 112, first paragraph, requires the specification to be written in "full, clear, concise, and exact terms." The specification is replete with terms which are not clear, concise and exact. The specification should be revised carefully in order to comply with 35 U.S.C. 112, first paragraph. Examples of some unclear, inexact or verbose terms used in the specification are: "contacts to the UPnP network" and "contacted to the UPnP network;" numerous grammatical errors and improper use of singular and/or plural form throughout the document.

Alternatively, a substitute specification in proper idiomatic English and in compliance with 37 CFR 1.52(a) and (b) is required. The substitute specification filed must be accompanied by a statement that it contains no new matter.

Claim Objections

There are translation errors throughout the claim statements. Please substitute the claims with proper idiomatic English where appropriate.

Claims 2 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. Claim 2 fails to further limit the independent claim referenced.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Regarding Claims 1, 8, and 18, the phrase "etc." or "such as" renders the claim(s) indefinite because the claim(s) include(s) elements not actually disclosed (those encompassed by "etc." or "such as"), thereby rendering the scope of the claim(s) unascertainable.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 2, 5 – 8, 16 – 21 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Appl. 2002/0180579 A1, filed by Tatsuji Nagaoka et al. (hereinafter referenced as "Nagaoka").

1. Regarding Claims 1, 2, 17, and 19 – 21, Nagaoka discloses a remote control system of a home network (Fig. 1; Abstract), comprising of a device control processing unit used as a local control point (CP) (Figs. 1 and 2; Pgs. 5-6, Para. 0099, 0100, 0103; home server comprises of a control unit which communicates with the home network management facility and the home-located devices) to view the home network by listing

the controlled devices (Fig. 3; Pg. 6, Para. 0108; display shows each home-located device or security system), the state each device (Fig. 3; Pg. 6, Para. 0108; status information shows the latest status of the home-located devices), a subscribed event list (Fig. 3; Pg. 6, Para. 0110; display of home-based devices shows the programming history of the recording requests made on particular devices that have such a feature, in this instance a VCR), and a service request list (Fig. 3; Pg. 6, Para. 0110; display of home-based devices shows the programming requests made on particular devices that have the ability to preprogram certain functions, in this instance a VCR). Nagaoka also discloses that the control processing unit processes a possible service request, changing a service request from a remote access service unit into at least one UPnP message (Pg. 5, Para. 0091, 0093, 0095; home network management facility receives a control instruction from remote user terminal, then transmits the received control instruction to the home server via packet communication network; home server communicates with the home-located electronic devices via UPnP). Furthermore, Nagaoka discloses that the control processing unit changes a message from a UPnP device into a notification request in case of need and transmitting it to a remote access service unit (Pg. 5, Para. 0092, 0093, 0094; if an alarm in triggered within the home network, the security system transmits notification to the home server via UPnP, which in turn, communicates the information on the alarm to the home network management facility which then generates electronic mail and transfers it to the remote user terminal).

2. Regarding Claims 5 and 16, Nagaoka discloses a remote control system of a home network (Fig. 1; Abstract) comprising of a remote access service unit for receiving

a user's web request from a remote terminal service unit (Pg. 5, Para. 0086; Pg. 11, Para. 0186; user inputs an operation via web display on the mobile terminal which transmits this request to the HTTP server), transmitting it to a device control processing unit by converting it into a corresponded service request according to contents of the web request (Pg. 11, Para. 0186, 0189, 0193; user input is transmitted by the system control unit in the HTTP server to the network management server and converted into control instructions to be transmitted to the home server), and transmitting a web response for a pertinent remote terminal to the remote terminal service unit by having a service view consisting of a set of at least one web document (Pg. 11, Para. 0186, 0195; once the instructions are complete, the network management server receives the control complete information and transfers that info to the HTTP server; then web data is sent to the user terminal displaying that the request was completed and the status of the home-located device after completion of the request).

3. Regarding Claim 6, Nagaoka discloses all the limitations of Claim 5 above. Nagaoka further discloses that the service view consists of a set of at least one web document connected with each other such as a home network device state and control page, a device list page, and a user option page (Figs. 14A-14N, 15A-15L; Pgs. 10-11, Para. 0177-0195; web pages are displayed based on user input, including a list of devices controlled, the state of the devices, and user option feature to change the status of or control the devices).

4. Regarding Claim 7, Nagaoka discloses all the limitations of Claim 5 above. Nagaoka further discloses that the remote access service unit includes a profile

database (Fig. 6; Pgs. 6-7, Para. 0118; customer management database), determines a service view of a remote access service according to service related information recorded in a profile database (Pg. 7, Para. 0120-127; security levels associated with each user determines the types of devices the user has access to), and provides various remote access services to a user and a remote terminal with reference to the service view (Fig. 6; Pgs. 6-7, Para. 0118-0128; security level of each user determines the type of devices they have remote access to and the services available to the user will be affected and shown on the user terminal).

5. Regarding Claim 8, Nagaoka discloses all the limitations of Claim 7 above. Nagaoka further discloses that the profile database includes a screen size, type of input device, and provider network bandwidth (Pg. 5, Para. 0085; Pg. 7, Para. 0133; communication capacity of terminal determined my maximum communication speed, the size of the picture, and communication standard associated with the corresponding model of the terminal).

6. Regarding Claim 18, Nagaoka discloses all the limitations of Claim 17 above. Nagaoka further discloses that the remote control system also includes a setup module for initializing the device control processing unit (Pg. 8, Para. 0152; packet registration and registration process to initiate communication with the remote unit), the profile database of the remote access service unit (Pg. 5, Para. 0085, 0086; Pg. 7, Para. 0133; terminal information database holds information regarding the remote unit's communication capabilities), and a communication module having asynchronous notification function (Fig. 2; Pg. 6, Para. 0104-0106; radio communication unit

communicates with mobile communication network to notify the user terminal of an alarm).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 3 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nagaoka.

7. Regarding Claim 3, Nagaoka discloses all the limitations of Claim 1 above. Nagaoka, further discloses that the device control processing unit has a database for each remote terminal that has access to the home network (Pg. 5, Para. 0085, 0086; Pg. 7, Para. 0133; terminal information database holds information regarding the remote unit's communication capabilities). However, Nagaoka does not specifically disclose that the device control processing unit includes one local CP for each remote terminal.

It would have been obvious to one skilled in the art at the time the application was filed that each remote terminal can be associated with a unique control point accessing the various devices within the home network. The user and terminal information, security level, and preferences that are stored within the system can be used to allow a specific configuration that can limit the types of devices that the user has access to. These configurations can either be done logically within one CP or physically with one CP associated with each remote terminal within the system. These

individually associated CP's will prevent the access of more harmful devices by specific users; for example, children will not have access to the home security system or the kitchen appliances.

8. Regarding Claim 4, Nagaoka discloses all the limitations of Claim 1 above. Nagaoka further discloses that the device control processing unit has a database for each remote terminal that has access to the home network (Pg. 5, Para. 0085, 0086; Pg. 7, Para. 0133; terminal information database holds information regarding the remote unit's communication capabilities). However, Nagaoka does not specifically disclose that the device control processing unit includes one local CP for each device kind.

It would have been obvious to one skilled in the art at the time the application was filed that each device kind can be associated with a unique CP within the home network. The Nagaoka system has database that stores access information associated with each user. It would have been obvious to one skilled in the art to also create a database storing information associated with each device that is connected to the home network. Furthermore, these devices can be grouped logically within the database or physically by having one local CP connected to one particular device type. For example, a CP will need different drivers and communication ports to control televisions versus a refrigerator. Having a different CP controlling those devices will allow the user to access or perform more specified functions available for each device type since the associated CP can be customized to the functions available within those devices less the specifications that are not needed to control the other devices.

Claims 9 – 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nagaoka as applied to Claim 5 above, in view of U.S. Patent 5,081,622, invented by Mehdi M. Nassehi et al. (hereinafter referenced as "Nassehi").

9. Regarding Claims 9 and 10, Nagaoka discloses all the limitations of Claim 5 as stated above. Nagaoka, however, does not specifically disclose that the remote access service unit includes a home network collision solving mechanism performed in a home network level, a device level, an operation level or performed in mixing a device level with an operation level. Nor does Nagaoka disclose that the mechanism performing in the operation level solves a collision problem according to a user priority rank, a remote access contact order and an operation order.

Nassehi discloses the use of a system that avoids collisions in packet switching networks at the operational level by queuing communication requests from multiple sources (Abstract). Nassehi also discloses that the collision avoidance system uses a packet header that includes bits to track the availability of a particular slot, the priority of the data packet, to transfer special markers associated with the data packet, and to specify the number of communication requests associated with that data packet (Fig. 2C; Col. 4, Lines 8-47). It would be obvious to one skilled in the art to implement the packet header to provide the means to avoid packet collisions within the home network by queuing the communication requests based on user priority rank, remote access contact order, and operation order. The bits determining whether a slot is available and the number of slots being requested control the operation of adding additional data packets into the cycle frame. Additionally, the priority bits can be used to associate with

the user priority within the home network and the queue pushes out the data on a FIFO basis, thus in network contact order. Using the various identification bits in the packet header allows the system to process user requests at a faster, more reliable rate. Furthermore, the priority ranking and the method of transmitting these data packets allow for more urgent requests to be transmitted and processed first.

10. Regarding Claims 11 and 12, Nagaoka, in further view of Nassehi, discloses all the limitations of Claim 9 above. Nagaoka further discloses that the remote access service unit includes a profile database (Fig. 6; Pgs. 6-7, Para. 0118; customer management database), determines a service view of a remote access service according to service related information recorded in a profile database (Pg. 7, Para. 0120-127; security levels associated with each user determines the types of devices the user has access to), and provides various remote access services to a user and a remote terminal with reference to the service view (Fig. 6; Pgs. 6-7, Para. 0118-0128; security level of each user determines the type of devices they have remote access to and the services available to the user will be affected and shown on the user terminal). However, neither Nagaoka nor Nassehi specifically disclose that the home network collision solving mechanism is stored in the device access database in the profile database or that the device access database includes a device access priority table recording priority per users about all devices in the home network.

It would have been obvious to one skilled in the art at the time the application was filed that the network collision solving mechanism will be stored in the device access database within the user profile database. The profile database within the

system disclosed in Nagaoka stores the access levels associated with each profile which controls each user's ability to access various devices attached to the home network. The system also tracks the devices that the user has access to so it would be obvious to track the device access of each user. The device access database can be utilized as a means of verifying that only certain users have accessed particular devices within the home network and who have made the various setting changes or service requests for each device.

Likewise, it would have been obvious to one skilled in the art at the time the application was filed that the device access database can include a device access priority table recording priority per users about all devices in the home network. The method of using the multiple bits in the packet header in the Nassehi system can be used to determine the priority of the user accessing the network system. The device access database can be comprised of various priority rankings depending on the user and the device being accessed from the security level associated with the user. By storing such information in the device access database, the system can easily accommodate a configuration of only one CP, a CP for every user terminal, or a CP based on each device type. Every CP within the system can be directly connected to the database centralizing the priority information so future requests can be quickly processed and directed to the home network device.

11. Regarding Claims 13 – 15, Nagaoka, in view of Nassehi, discloses all the limitations of Claim 11 above. However, neither Nagaoka nor Nassehi specifically disclose that the device access database includes a sharing type table sorted by each

device's operations indicating access possibility from other users in performing a specific operation supported by that device or that the device access database records an access authority table by priorities or users regarding operations supported by each device.

It would have been obvious to one skilled in the art at the time the application was filed that the device access database can include a sharing type table by device's operations indicating access possibility from other users in performing of a specific operation supported by a device. The special marker bits within the Nassehi system can be used to allow the various device operations to be available or busy depending on that operation. The four bits can encompass the various operations that are available so if the header includes the specific bits associated with that operation, the device can continue to be available to other users. This allows the devices to process more than one service request at a given time that do not cause harm to that device, the home, or other devices when performed together.

Furthermore, it would have been obvious to one skilled in the art at the time the application was filed that the device access database records an access authority table by priorities or users regarding operations supported by each device. The priority bits within the Nassehi system allow service requests made into the home network to perform the highest priority service first. Each user terminal is also associated with a security level per Nagaoka and the user information is stored within the user profile database. Since the priorities will determine which device will perform service request first and certain service requests are more important than others, it would be obvious to

record the device access authority table by priorities. Additionally, each user has a specific security level associated with it that determines the types of devices the user has access to making it obvious to record the device access authority table by users. Recording the device access authority table by either users or priorities provides a means of verifying that only certain users have accessed particular devices or services within the home network and made the various setting changes or service requests for each device.

Additional References

Additional references that are relevant to the pending application and not cited:

U.S. Patent 6,198,479 B1 – method and system for commanding and controlling diverse home devices on a home network to perform a service via a web browser;

U.S. Patent 6,005,861 – home network architecture interconnecting devices in the home making the entertainment services available to all terminals connected to the internal network;

U.S. Patent 6,026,150 – in-home network including a plurality of consumer electronic devices coupled to a communication line;

U.S. Appl. 2001/0011284 A1 – method and system for detecting, commanding and controlling diverse home devices connected to a home network;

U.S. Patent 4,514,843 – packet collision avoidance technique for a plurality of devices that are connected to a common node.

Contacts

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tae K. Kim, whose telephone number is (571) 270-1979. The examiner can normally be reached on Monday - Friday (8:00 AM - 5:00 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Frantz Coby, can be reached on (571) 272-4017. The fax phone number for submitting all Official communications is (703) 872-9306. The fax phone number for submitting informal communications such as drafts, proposed amendments, etc., may be faxed directly to the examiner at (571) 270-2979.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at (866) 217-9197 (toll-free).

TKK

9/16/2007

FRANTZ COBY
SUPERVISORY PATENT EXAMINER